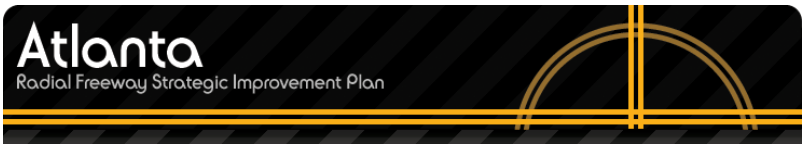


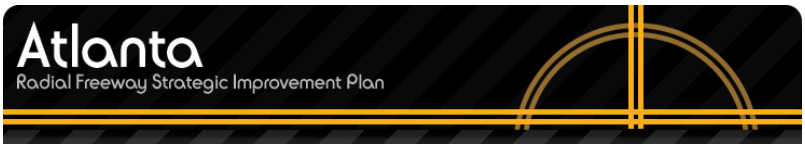
Stakeholder Workshop Summary
Georgia DOT Radial Freeway Strategic Improvement Plan
March 10, 2009
1:30 – 3:30 pm

GDOT Participants
Steve Walker, Georgia DOT
Ulysses Mitchell, Georgia DOT
Marco Trigueros, Georgia DOT
Robert Graham, Georgia DOT

Stakeholder Participants
Kyung Hwa Kim, ARC
Laura Keyes, ARC
Kofi Wakhisi, ARC
Lamont Kiser, Bartow County
Steve Bradley, Bartow County
Diwan Singla, Clayton County
Jason Gaines, Cobb County
John Portwood, DeKalb County
Randy Hulsey, Douglas County
David Cassell, GRTA
Vince Edwards, Gwinnett County
Kim Conroy, Gwinnett DOT
Anthony Dukes, Griffin-Spalding County
Vincent Passariello, Newton County
Steven Sheffield, SRTA
Patrick Vu, SRTA
Kevin Walter, Newton County

Consultant Team Participants
Marc Cutler, Cambridge Systematics
John Duesing, Cambridge Systematics
Elizabeth Stepp, Cambridge Systematics
Kenny Voorhies, Cambridge Systematics
Andrew Smith, HNTB
Claudia Bilotto, HNTB
Tom Hutchinson, HNTB

Leah Vaughan, Sycamore Consulting



Summary

Mr. Steve Walker, Georgia DOT project manager, opened the meeting by welcoming the attendees and thanking everyone for their participation. Steve then asked each person to introduce him/herself.

Following self-introductions, Steve turned the meeting over to Mr. Kenny Voorhies of Cambridge Systematics. Kenny began a power point presentation, indicating that he would give a brief overview of the project, John Duesing would speak about the development of the model, and Claudia Bilotto would speak about using the model to develop a strategic improvement plan.

A copy of the power point presentation is attached. A synopsis of the presentation follows. Questions and answers appear after the presentation overview.

Presentation Overview

The Georgia Department of Transportation is developing a Radial Freeway Study to perform a comprehensive analysis of the radial freeway network consisting of approximately 365 lane miles on I-75, I-575, SR 400, I-985, I-20, I-85, US 78, I-675 and SR 166 in the 20 county metro Atlanta area. This project is the final study in a series of projects designed to comprehensively evaluate the Interstate System in Georgia. The Interstate System outside of the Atlanta area was studied as part of the Interstate System Plan in 2002. I-285 is being studied as part of the Revive-285 study and the I-285 Strategic Implementation Plan (SIP), and the Downtown Connector Study evaluated the interstate in the downtown area. By looking at the interstates as a system, the Department will be able to clearly define the needs, establish priorities for improving the facilities and identify operational improvements that extend the life of the facility.

The purpose of the Radial Freeway Study is to strategically evaluate the benefits of operational improvements and major planned investments on highway system performance. The focus of this evaluation is congestion relief. To accomplish this aim, extensive modeling of the radial freeway system is being performed. A tiered approach to analyzing improvement strategies will be used, and will assess conditions in three time horizons: 2010, 2020, and 2030.

The Radial Freeway Study process has three major modeling components: macro-level (overview of the entire network), meso-level (model of each interstate) and micro-level (individual exits and hot-spots). The macro-level model is the ARC's regional model. The meso-level model, known as a pseudo DTA model, was first developed for the I-285 Strategic Implementation Plan, and was modified for each interstate in the radials freeway study. The micro

simulation model is a VISSIM application, which is done at a smaller geographic scale and is focused on nine sub areas that have been identified as part of this study. Each of these models has been calibrated using aerial traffic data and recent traffic counts.

The future baseline scenario has been developed. It includes *Envision6* RTP network with long-range projects along the radial freeways removed. This future baseline reflects a "no improvement" scenario, which allows for a benchmark comparison that is used to measure the benefits of various improvement scenarios.

Three improvement scenarios are proposed for testing. The first scenario would include a set of operational improvement projects, which are designed to include quick-to-implement, small projects requiring no right-of-way purchase. Examples of operational improvements are: lane striping, ramp closure, additional lane(s) on ramp, signal optimization, turn lanes, and channelization.

A second proposed scenario would augment the operational improvements scenario by adding a set of projects aimed at bottleneck mitigation. These additional projects focus on relieving identified bottlenecks, and include: interchange reconstruction, bridge improvements, auxiliary lanes, and major ramp improvements or reconfiguration.

A third proposed scenario would be characterized as a major investment scenario. It would combine operational, bottleneck mitigation, and minor/major capacity projects, such as managed lanes and major interchange reconstruction.

Sources for projects include *Envision6* RTP, planning partner input, ongoing and completed plans and studies not included in *Envision 6*, and VISSIM micro-level analysis. Outputs of the study will be available for ARC as they develop Plan 2040, the next update of the region's long-range plan, and others. It will also provide data and findings to support GDOT planning.

The Radial Freeway Study began in late May, 2007 and is scheduled for completion in December 2009.

Question and Answer Session

Meeting participants made comments and asked a number of questions. Comments and questions are summarized below:

Q. How did the model output compare with the aerial traffic volume data (Sky Comp)?

A. The aerial data and model output were very comparable.

Q. In building the model, did you consider traffic volumes off of the interstate?

A. Our standard in the VISSIM model was to include data from 2 signalized intersections on each side of the interstate. At the example shown on I-75/I-675 at GA 138, we included the entire roadway due to the close proximity of the interchanges.

Q. For the scenarios presented are you using all *Envision6* projects?

A. We have not made a final determination, however, a lot of projects included in *Envision6* have become infeasible, and other projects need to be amended in. At this point, our intention is to use Envision6 as a source of projects but not to use it in its entirety. Rather, we would like to use the latest and greatest information available.

Q. There are 14 CTPs that have been adopted since *Envision6.* How will you determine what is in those CTP's and/or use that information in your process? Do you need the ARC's help?

A. We want information on projects that may be on the horizon, especially if they are not considered in *Envision6*. Adopted CTP projects, and projects currently in a planning process, will be considered as well. However, not all projects are relevant to this study. We are most interested in what is happening on – or right off - of the interstate system because our focus is on the performance of the radial freeways.

Q. What will be the outcome of the Radial Freeway Study?

A. We will basically be providing a strategic look at existing, planned and programmed projects using a much more detailed tool**.** Our primary focus will be on radial freeway operations and performance over time.

Q Will the scenarios for each corridor be interdependent?

A. The answer depends upon the scenario and the level of improvement we are testing. Each tier of improvements uses a different modeling tool.

The VISSIM model is corridor specific, and is well suited for testing operational improvements. The psuedo DTA model allows for testing of bottleneck mitigation strategies, also on a corridor specific basis. Major investment projects will need to be tested using the regional model, and therefore, results will be system-side or multi-corridor.

Q. When you look out to 2020 or 2030, will the model look outside of the existing bottleneck corridors?

A. The term bottleneck is a specific one used in microsimulation. As part of the radial freeway study, we have identified nine known bottleneck sub areas. These areas allow for close-up analysis of operational issues within a specific area. The VISSIM microsimulation model's strength in zooming in on operational issues limits its applicability in areas outside the identified sub-areas. That is why we have a tiered modeling approach. Both the pseudo DTA model (mesoscopic) and regional model will capture issues in the outlying counties, both in the present and future.

Q. I am concerned about the bottlenecks in Newton County. What if the model shows it not to be an issue? What happens if it falls out?

A. This model is for a specific study. We are looking for improvements on the Radial Freeways for the 20 county area. Just because the problems in Newton County are not identified as one of the top 9 for the purpose of this study does not mean it is not an issue. Traffic congestion issues along the freeway in Newton County will be identified in the pseudo DTA and regional models.

C. I see the value in this tool for looking out to 2030 to identify where the problems will be – that's where we need to take this model. Our economic viability depends on mobility on I-75. This tool will be beneficial in terms of assisting with economic development and having the data to show folks wanting to invest in the area that we know what congestion will be like.

Q. Have you figured out how IT3 will fit into this?

A. Though we do not have a direct link formalized at this point, the principles, goals, the fact that the projects will be tested in a tiered way with performance measures, etc. will be matched up to the IT3 framework.

Q. Somewhere in the 30 year model there needs to be a Northern Arc. It has to be considered.

A. Actually, it is unlikely to be considered as it is not currently on anyone's project list. We must consider the project sources we have now. Projects that are currently planned or programmed will rise to the top. The northern arc is in a deep sleep, and in order for it to rise up, there needs to be some political influence/muster.

Q. How do you weigh big investments vs. small investments?

A. We will be looking at smaller projects first to see if they allow us to improve highway congestion and meet identified performance targets, which have not yet been identified. If the performance targets are not met, we will then look towards mid range investments (bottleneck mitigation) and subsequently the major investment projects to meet the goals.

C. This sequencing seems to be biased against major investment projects. Don't forget about long range improvements that may not be included in the RTP. Don't fix the small stuff today at the expense of the big picture issues of tomorrow. Don't lose sight of the vision.

R. Please remember this is not intended to be the next RTP. We are attempting to identify and target performance improvements that will positively affect operations on the radial freeway network.

C. We need to be careful not to create high cost interim projects that become throw away projects for the long term major investment projects that are needed.

C. We don't want to continue the cycle of throwing money at projects instead of being proactive towards solving the issues before they become major problems.

Q. Are you constrained to the 9 corridors identified for the VISSIM model?

A. Yes.

Q. What improvements are assumed on I-285?

A. On highways and arterials off of the radial freeways, we are examining the projects in *Envsion6* for inclusion.

Q. What about the Freight Study, its model and outputs? How is that info coordinated with this study?

A. We can review the study information, but our model is based on the ARC model, which is not yet compatible with the freight study model.

C. Newton County would prefer to see better access to park and ride lots, bus rapid transit. We would like to see funding and language that encourages and supports congestion mitigation, especially at I-20 and I-285. This is not something that can be modeled, but we want to put our two cents in for reducing traffic.

R. We've seen something like this along SR 6 in Douglas County. With the State leading, improvements on the arterials led to a reduction of congestion on the interstate. But please remember the strengths and limitations of these modeling tools. The specific focus of the study is to examine operational, bottleneck mitigation, and major investment projects on the radial freeway system.

Q. Is there any sort of mode split being considered for the long term?

A. The radial freeway study assumes the same mode split that is included in *Envision6.*

C. Seeing a cost benefit analysis of the improvements would be beneficial in prioritizing projects on cost and their impact on reducing congestion.

C. At the end of the day we can agree that there are operational and mid range improvements that could be cost and congestion effective. It's the prioritization of the major investment projects that will be difficult.

C. I would rather see funds for BRT, park and rides, etc. rather than throwing another general purpose lane in each direction on the radials.

R. We are not evaluating the addition of general purpose (GP) lanes on the interstate system. As a matter of policy, the GDOT Board has dictated that no additional GP lanes will be built; but rather, additional capacity will be added as a managed lane. We did do some testing of GP lanes as part of a model sensitivity analysis. In this scenario, GP lanes were examined for comparative analysis only. They did inform the study that

SR 400 could only be improved with major investments, not operational or bottleneck mitigation projects. Therefore, we included one additional managed lane in each direction on SR 400 for the future baseline scenario.

C. Developing performance measures may be helpful in incorporating some other elements. For example, having reliability as a performance measure may tip the scale towards transit improvements.

C. There are huge issues at the I-20 interchanges with I-285 on both the east and west side of Atlanta.

C. Expectations from this group and the public in developing a "Strategic Improvement Plan" lead to confusion. Change the name so that people won't expect too much.

Q. Does this study take parallel facilities into account?

A. Yes, parallel routes are included in the psuedo DTA model (mesoscopic level) and, to some extent, to in the microsimulation model**.**

C. Better definitions of each model level might be helpful, including what each level does, what it captures, the characteristics of each, and a comparison between the ARC model and the project model.

Next Steps

Mr. Voorhies reviewed the project next steps and indicated that the group would reconvene to review performance measures and initial study findings. In the meantime, the group was asked to submit information to the study team relating to any projects that might be relevant to this study.

The meeting was adjourned.

Steve Bradley of Bartow County submitted the following projects of interest:

- GA 113 Relocation Project: from GA 278 in Rockmart to I-75. This project is currently under construction – a couple of interchanges up from GA 92.

- US 411 Connector from 411 South in Floyd County to I-75 in Cartersville.

- Third Army Road – new interchange with I-75 being pushed by Cobb and Paulding Counties. Probably on a 2030/2040 horizon.